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NEWS	1		Web Page URLs for STN Seminar Schedule - N. America
NEWS	2		"Ask CAS" for self-help around the clock
NEWS	3	Jun 03	New e-mail delivery for search results now available
NEWS	4	Aug 08	PHARMAMarketLetter(PHARMAML) - new on STN
NEWS	5	Aug 19	Aquatic Toxicity Information Retrieval (AQUIRE) now available on STN
NEWS	6	Aug 26	Sequence searching in REGISTRY enhanced
NEWS	7	Sep 03	JAPIO has been reloaded and enhanced
NEWS	8	Sep 16	Experimental properties added to the REGISTRY file
NEWS	9	Sep 16	CA Section Thesaurus available in CAPLUS and CA
NEWS	10	Oct 01	CASREACT Enriched with Reactions from 1907 to 1985
NEWS	11	Oct 24	BEILSTEIN adds new search fields
NEWS	12	Oct 24	Nutraceuticals International (NUTRACEUT) now available on STN
NEWS	13	Nov 18	DKILIT has been renamed APOLLIT
NEWS	14	Nov 25	More calculated properties added to REGISTRY
NEWS	15	Dec 04	CSA files on STN
NEWS	16	Dec 17	PCTFULL now covers WP/PCT Applications from 1978 to date
NEWS	17	Dec 17	TOXCENTER enhanced with additional content
NEWS	18	Dec 17	Adis Clinical Trials Insight now available on STN
NEWS	19	Jan 29	Simultaneous left and right truncation added to COMPENDEX, ENERGY, INSPEC
NEWS	20	Feb 13	CANCERLIT is no longer being updated
NEWS	21	Feb 24	METADEX enhancements
NEWS	22	Feb 24	PCTGEN now available on STN
NEWS	23	Feb 24	TEMA now available on STN
NEWS	24	Feb 26	NTIS now allows simultaneous left and right truncation
NEWS	25	Feb 26	PCTFULL now contains images
NEWS	26	Mar 04	SDI PACKAGE for monthly delivery of multifile SDI results
NEWS	27	Mar 20	EVENTLINE will be removed from STN
NEWS	28	Mar 24	PATDPAFULL now available on STN
NEWS	29	Mar 24	Additional information for trade-named substances without structures available in REGISTRY
NEWS	30	Apr 11	Display formats in DGENE enhanced
NEWS	31	Apr 14	MEDLINE Reload
NEWS	32	Apr 17	Polymer searching in REGISTRY enhanced
NEWS	33	Jun 13	Indexing from 1947 to 1956 added to records in CA/CAPLUS
NEWS	34	Apr 21	New current-awareness alert (SDI) frequency in WPIDS/WPINDEX/WPIX
NEWS	35	Apr 28	RDISCLOSURE now available on STN
NEWS	36	May 05	Pharmacokinetic information and systematic chemical names added to PHAR
NEWS	37	May 15	MEDLINE file segment of TOXCENTER reloaded
NEWS	38	May 15	Supporter information for ENCOMPPAT and ENCOMPLIT updated
NEWS	39	May 16	CHEMREACT will be removed from STN

<N02/10/2003Page 2 10:01 <golam sham <mm/dd/yyyy

NEWS 40 May 19 Simultaneous left and right truncation added to WSCA  
NEWS 41 May 19 RAPRA enhanced with new search field, simultaneous left and  
right truncation  
NEWS 42 Jun 06 Simultaneous left and right truncation added to CBNB  
NEWS 43 Jun 06 PASCAL enhanced with additional data  
NEWS 44 Jun 20 2003 edition of the FSTA Thesaurus is now available  
NEWS 45 Jun 25 HSDB has been reloaded

NEWS EXPRESS April 4 CURRENT WINDOWS VERSION IS V6.01a, CURRENT  
MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP),  
AND CURRENT DISCOVER FILE IS DATED 01 APRIL 2003  
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NEWS WWW CAS World Wide Web Site (general information)

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FILE 'HOME' ENTERED AT 15:48:56 ON 01 JUL 2003

=> FIL CAPLUS

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'CAPLUS' ENTERED AT 15:49:18 ON 01 JUL 2003

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FILE COVERS 1907 - 1 Jul 2003 VOL 139 ISS 1  
FILE LAST UPDATED: 30 Jun 2003 (20030630/ED)

This file contains CAS Registry Numbers for easy and accurate  
substance identification.

=> s perfluoro(w)alkanesulfonate?  
12909 PERFLUORO

09924591

2853 ALKANESULFONATE?

L1 4 PERFLUORO(W)ALKANESULFONATE?

=> s perfluoro(w)alkylsulfonic(w)acid?

12909 PERFLUORO

509 ALKYL SULFONIC

4308366 ACID?

L2 2 PERFLUORO(W)ALKYL SULFONIC(W)ACID?

=> d l1 ibib abs hitstr tot

L1 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:628801 CAPLUS

DOCUMENT NUMBER: 137:180942

TITLE: Inhibition of gap junctional intercellular communication by perfluorinated compounds in rat liver and dolphin kidney epithelial cell lines in vitro and Sprague-Dawley rats in vivo

AUTHOR(S): Hu, Wenye; Jones, Paul D.; Upham, Brad L.; Trosko, James E.; Lau, Christopher; Giesy, John P.

CORPORATE SOURCE: Aquatic Toxicology Laboratory, Department of Zoology, National Food Safety and Toxicology Center and Institute of Environmental Toxicology, Michigan State University, East Lansing, MI, 48824, USA

SOURCE: Toxicological Sciences (2002), 68(2), 429-436

CODEN: TOSCF2; ISSN: 1096-6080

PUBLISHER: Oxford University Press

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Gap junctional intercellular communication (GJIC) is the major pathway of intercellular signal transduction, and is thus important for normal cell growth and function. Recent studies have revealed a global distribution of some perfluorinated org. compds., esp. perfluorooctane sulfonic acid (PFOS) in the environment. Because other perfluoroalkanes had been shown to inhibit GJIC, the effects of PFOS and related sulfonated fluorochems. on GJIC were studied using a rat liver epithelial cell line (WBF344) and a dolphin kidney epithelial cell line (CDK). In vivo effects on GJIC were studied in Sprague-Dawley rats orally exposed to PFOS for 3 days or 3 wk. Effects on GJIC were measured using the scrape loading dye technique. PFOS, perfluorooctane sulfonamide (PFOSA), and perfluorohexane sulfonic acid (PFHA) were found to inhibit GJIC in a dose-dependent fashion, and this inhibition occurred rapidly and was reversible. Perfluorobutane sulfonic acid (PFBS) showed no significant effects on GJIC within the concn. range tested. A structure activity relationship was established among all 4 tested compds., indicating that the inhibitory effect was detd. by the length of fluorinated tail and not by the nature of the functional group. The results of the studies of the 2 cell lines and the in vivo exposure were comparable, suggesting that the inhibitory effects of the selected perfluorinated compds. on GJIC were neither species nor tissue-specific and can occur both in vitro and in vivo.

REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:651460 CAPLUS

DOCUMENT NUMBER: 135:196652

TITLE: Preparation of bis(perfluoro alkanesulfonyl)imide anion-doped polythiophene and battery electrode thereof

INVENTOR(S): Takeda, Masayuki; Takahashi, Takako; Ue, Makoto

PATENT ASSIGNEE(S): Mitsubishi Chemical Corp., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001240730	A2	20010904	JP 2000-50836	20000228
PRIORITY APPLN. INFO.:			JP 2000-50836	20000228

OTHER SOURCE(S): MARPAT 135:196652

AB Title polymer, demonstrating high elec. cond. and good impedance properties, useful as a cathode in secondary battery, was prepd. by doping polythiophene with bis(perfluoroalkanesulfonyl)imide anion and/or tris(perfluoroalkanesulfonyl)methide anion. Thus, a cathodic electrolytic capacitor was prepd. by using polythiophene having elec. cond. 15 S/cm (polymd. using FeCl<sub>3</sub> in the presence of lithium bis(trifluoromethanesulfonyl)imide) in N-methylpyrrolidinone to give a battery showing capacitance 24 .mu.F and dielec. loss 0.9% at 120 Hz and equiv. resistance 5.OMEGA. at 100 kHz.

L1 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1991:130274 CAPLUS

DOCUMENT NUMBER: 114:130274

TITLE: Partial molar volumes of sodium perfluoroalkanoates and lithium perfluoro-1-alkanesulfonates in aqueous solutions

AUTHOR(S): Tamaki, Kunio; Watanabe, Sumiko; Daikyoji, Yuichi  
CORPORATE SOURCE: Dep. Chem., Yokohama City Univ., Yokohama, 236, Japan  
SOURCE: Bulletin of the Chemical Society of Japan (1990), 63(12), 3681-2

CODEN: BCSJA8; ISSN: 0009-2673

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The densities of aq. solns. of sodium perfluoroalkanoates, F(CF<sub>2</sub>)<sub>n</sub>COONa (n = 1-4, 6, 7) and lithium perfluoro-1-alkanesulfonates, F(CF<sub>2</sub>)<sub>n</sub>SO<sub>3</sub>Li (n = 1, 4, 8) were measured at 25.degree.C, and the limiting partial molar volumes were calcd. The assignment of group partial molar volumes is discussed.

L1 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1967:37572 CAPLUS

DOCUMENT NUMBER: 66:37572

TITLE: **Perfluoro alkanesulfonate** esters.

Reaction of 2,2,2-trifluoroethyl trifluoromethanesulfonate with-p-dimethylaminophenylmagnesium bromide

AUTHOR(S): Mendel, Arthur

CORPORATE SOURCE: Minnesota Mining and Manuf. Co., St. Paul, MN, USA  
SOURCE: Journal of Organic Chemistry (1966), 31(10), 3445-6

CODEN: JOCEAH; ISSN: 0022-3263

DOCUMENT TYPE: Journal

LANGUAGE: English

GI For diagram(s), see printed CA Issue.

AB p-Me<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>MgBr with CF<sub>3</sub>SO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CF<sub>3</sub> gave p-dimethylaminophenyl trifluoromethyl sulfone (I) and 2,2,2 - trifluoroethyl p - dimethylaminobenzenesulfonate. In addn. of acid-sol. nonfluorine-contg. purple material was isolated but could not be purified.

=> d 12 ibib abs hitstr tot

L2 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2003 ACS  
ACCESSION NUMBER: 2003:282877 CAPLUS  
DOCUMENT NUMBER: 138:306811  
TITLE: Oligomeric proton-conducting polyimide and  
acid-functionalized block copolymers as fuel cell  
polymer separators  
INVENTOR(S): Lehmann, Dieter; Meier-Haack, Jochen; Vogel, Claus;  
Taeger, Antje; Pereira Nunes, Suzana; Paul, Dieter;  
Peinemann, Klaus-viktor; Jakoby, Kai  
PATENT ASSIGNEE(S): Institut Fuer Polymerforschung Dresden E.V., Germany;  
Gkss-Forschungszentrum Geesthacht Gmbh  
SOURCE: PCT Int. Appl., 30 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003030289	A2	20030410	WO 2002-DE3736	20020927
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10149716	A1	20030430	DE 2001-10149716	20010928
PRIORITY APPLN. INFO.: DE 2001-10149716 A 20010928				
AB Fuel cell polymer membranes, esp. with improved methanol retention capacity for direct methanol fuel cells, comprises one or more sepg. layers consisting of diblock or multiblock copolymers, with general segment structures A-(B-A) <sub>k</sub> , B-(A-B) <sub>l</sub> , and (A-B) <sub>m</sub> (k .gtoreq.1, l .gtoreq.1, and m .gtoreq.1), in which the block segment (A) comprises an oligomer segment that is non-conducting to electrons and non-conducting to protons, and the block segment (B) comprises an oligomer segment that is conducting to protons and non-conducting to electrons. Block segments (A) and (B) are selected from oligoarylimide, oligoaryl sulfide, oligoaryl ether sulfone, oligoaryl ether, oligoaryl ether ketone, oligoarylene ether ether ketone, oligoaramide, oligoaryl urea, oligoarylene oxadiazole, oligoarylene sulfonamide, oligobenzimidazole, oligobenzoxazole, oligobenzthiazole, and oligoquinoline segments, with d.p. 2-50, optionally in combination with proton-conducting groups, such as sulfonic acids, phosphonic acids, (perfluoro)alkylsulfonic acids, (perfluoro)alkylphosphonic acids, (perfluoro)alkenecarboxylic acids, triazine groups, tertiary-amino groups, and quaternary ammonium groups.				

L2 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2003 ACS  
ACCESSION NUMBER: 1999:780515 CAPLUS  
DOCUMENT NUMBER: 131:351010

TITLE: High selective and effective synthetic method and use  
of functional (Z,E) conjugated bi-alkene compounds  
INVENTOR(S): Lu, Xiyan; Wang, Zhong  
PATENT ASSIGNEE(S): Shanghai Inst. of Organic Chemistry, C.A.S., Peop.  
Rep. China  
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 17 pp.  
CODEN: CNXXEV  
DOCUMENT TYPE: Patent  
LANGUAGE: Chinese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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CN 1151392	A	19970611	CN 1996-116429	19960718
CN 1045587	B	19991013		

PRIORITY APPLN. INFO.: CN 1996-116429 19960718

OTHER SOURCE(S): CASREACT 131:351010; MARPAT 131:351010

AB Title compds. [(Z,E)-XCH:CHCH:CHCH(R1)CH(R2)EWG (X = Cl, Br, I; R1 = H, C1-3 alkyl; R2 = H, C1-6 alkyl, COOR3, Ph, substituted phenyl; R3 = C1-8 alkyl; EWG = CHO, COR4, CH=NSO2Ar; Ar = Ph, methylphenyl; R4 = C1-2 alkyl phenyl)] are prepd. by conjugating R1HC:CR2EWG (R1, EWG as above) with acetylene and Pd(II) as catalysts in the presence of acid and MX (M = Li, Na, K, Bu4N, (CH3(CH2)7)4N; X = Cl, Br, I) in polar solvent (AcOH, TFA, MeCN, DMF-H2O, Et2O/H2O, benzene/H2O) at 0-50.degree. for 1-24 h. The mole ratio of Pd(II) catalyst to acetylene, MX, and R1CH:CR2EWG is 0.00005-0.05:1-1,. The Pd(II) catalysts are selected from Pd(OAc)2, PdCl2(PhCN)2, PdCl2(MeCN)2, Pd(acac)2, PdCl2, PdBr2, Li2PdCl4, and Li2PdBr4; and the acid from HCl, HBr, H2SO4, H3PO4, HOAc, trifluoroacetic acid, **perfluoro-alkylsulfonic acid**, and fluoro-chloroalkylsulfonic acid. The compd. is used for synthesis of material contg. the conjugated bi-alkene of pesticide, medicine, cosmetic, and perfume.

=> log y

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
27.27	27.48

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
-3.91	-3.91

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09924591

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NEWS 3 SEP 09 CA/CAPLUS records now contain indexing from 1907 to the  
present  
NEWS 4 Jul 15 Data from 1960-1976 added to RDISCLOSURE  
NEWS 5 Jul 21 Identification of STN records implemented  
NEWS 6 Jul 21 Polymer class term count added to REGISTRY  
NEWS 7 Jul 22 INPADOC: Basic index (/BI) enhanced; Simultaneous Left and  
Right Truncation available  
NEWS 8 AUG 05 New pricing for EUROPATFULL and PCTFULL effective  
August 1, 2003  
NEWS 9 AUG 13 Field Availability (/FA) field enhanced in BEILSTEIN  
NEWS 10 AUG 15 PATDPAFULL: one FREE connect hour, per account, in  
September 2003  
NEWS 11 AUG 15 PCTGEN: one FREE connect hour, per account, in  
September 2003  
NEWS 12 AUG 15 RDISCLOSURE: one FREE connect hour, per account, in  
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September 2003  
NEWS 14 AUG 18 Data available for download as a PDF in RDISCLOSURE  
NEWS 15 AUG 18 Simultaneous left and right truncation added to PASCAL  
NEWS 16 AUG 18 FROSTI and KOSMET enhanced with Simultaneous Left and Right  
Truncation  
NEWS 17 AUG 18 Simultaneous left and right truncation added to ANABSTR  
NEWS 18 SEP 22 DIPPR file reloaded  
NEWS 19 SEP 25 INPADOC: Legal Status data to be reloaded  
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=>

Uploading

THIS COMMAND NOT AVAILABLE IN THE CURRENT FILE

Do you want to switch to the Registry File?

Choice (Y/n):

Switching to the Registry File...

09924591

<N02/10/2003Page 8 10:01 <golam sham <mm/dd/yyyy

Some commands only work in certain files. For example, the EXPAND command can only be used to look at the index in a file which has an index. Enter "HELP COMMANDS" at an arrow prompt (=>) for a list of commands which can be used in this file.

=> FILE REGISTRY

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 09:57:01 ON 02 OCT 2003  
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STRUCTURE FILE UPDATES: 1 OCT 2003 HIGHEST RN 596788-60-2  
DICTIONARY FILE UPDATES: 1 OCT 2003 HIGHEST RN 596788-60-2

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2003

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Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STN Note 27, Searching Properties in the CAS Registry File, for complete details:  
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=>

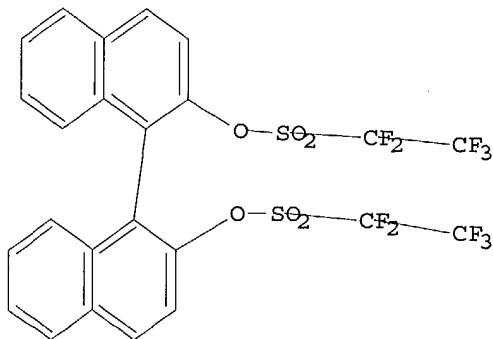
Uploading 09924591.str

L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

09924591



<N02/10/2003Page 9 10:01 <golam sham <mm/dd/yyyy

=> s l1

SAMPLE SEARCH INITIATED 09:57:20 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 3 TO ITERATE

100.0% PROCESSED 3 ITERATIONS 0 ANSWERS  
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 3 TO 163  
PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s l1 sss full

FULL SEARCH INITIATED 09:57:26 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 21 TO ITERATE

100.0% PROCESSED 21 ITERATIONS 1 ANSWERS  
SEARCH TIME: 00.00.01

L3 1 SEA SSS FUL L1

=> FIL CAPLUS

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	148.15	148.36

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FILE COVERS 1907 - 2 Oct 2003 VOL 139 ISS 14  
FILE LAST UPDATED: 1 Oct 2003 (20031001/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l3

L4 1 L3

=> d l4 ibib abs hitstr tot

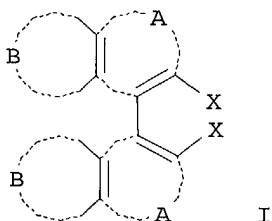
L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS on STN  
ACCESSION NUMBER: 2001:326265 CAPLUS  
DOCUMENT NUMBER: 134:326625

09924591

TITLE: Preparation of 2,2'-bis(diphenylphosphino)-1,1'-binaphthyls as catalyst ligands  
INVENTOR(S): Ishii, Akio; Ujiie, Mikio; Tanuma, Mitsuru  
PATENT ASSIGNEE(S): Central Glass Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001122847	A2	20010508	JP 1999-307773	19991028
PRIORITY APPLN. INFO.:			JP 1999-307773	19991028
OTHER SOURCE(S):			CASREACT 134:326625; MARPAT 134:326625	

GI

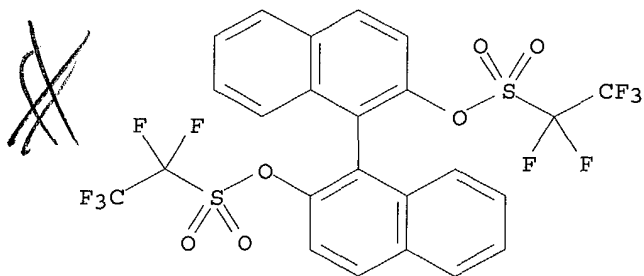


AB Title compds. I [X = P(R1)2; A = CR:CR, (un)substituted o-C6H4; B = (CHR)4, (un)substituted benzene or naphthalene residue; R = H, C1-12 alkyl, alkoxy, acyl, alkoxycarbonyl, cyano, perfluoroalkyl, OCF3, halo, (un)substituted Ph, silyl; R1 = (un)substituted Ph, cyclohexyl, cyclopentyl, naphthyl] are prepd. by reaction of I (X = OH) with CnF2n+1SO2Y or (CnF2n+1SO2)2O (n = 2, 3; Y = F, Cl, Br, I) in the presence of bases and reaction of the resulting sulfonates with either (a) HP(R1)2 (R1 = same as I) in the presence of bases and Ni catalysts or (b) ClP(R1)2 (R1 = same as I) in the presence of Zn and Ni catalysts.  
(S)-(-)-1,1'-bi-2-naphthol was treated with C2F5SO2F in the presence of Et3N at 100.degree. for 16 h to give 89% ditriflate, which was treated with HPPH2 in DMF in the presence of NiCl2(dppe) and DABCO at 100.degree. for 2-3 days to give 74% (S)-2,2'-bis(diphenylphosphino)-1,1'-binaphthyl.

IT **337370-66-8P**  
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. of bis(diphenylphosphino)binaphthyls from binaphthols via sulfonates)

RN 337370-66-8 CAPLUS

CN Ethanesulfonic acid, pentafluoro-, (1S)-[1,1'-binaphthalene]-2,2'-diyl ester (9CI) (CA INDEX NAME)



=> FIL REGISTRY  
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
6.20	154.56

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
-0.65	-0.65

CA SUBSCRIBER PRICE

FILE 'REGISTRY' ENTERED AT 09:59:54 ON 02 OCT 2003  
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STRUCTURE FILE UPDATES: 1 OCT 2003 HIGHEST RN 596788-60-2  
DICTIONARY FILE UPDATES: 1 OCT 2003 HIGHEST RN 596788-60-2

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2003

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

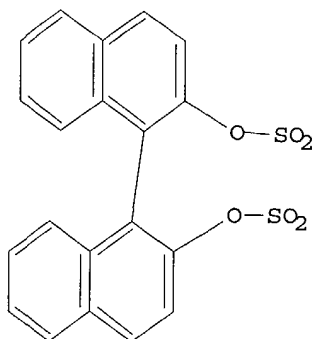
Experimental and calculated property data are now available. See HELP  
PROPERTIES for more information. See STNote 27, Searching Properties  
in the CAS Registry File, for complete details:  
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=>  
Uploading 09924591a.str

L5 STRUCTURE UPLOADED

=> d 15  
L5 HAS NO ANSWERS  
L5 STR

09924591



Structure attributes must be viewed using STN Express query preparation.

=> s l5

SAMPLE SEARCH INITIATED 10:00:16 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 16 TO ITERATE

100.0% PROCESSED 16 ITERATIONS 8 ANSWERS  
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 80 TO 560  
PROJECTED ANSWERS: 8 TO 329

L6 8 SEA SSS SAM L5

=> s l5 sss full

FULL SEARCH INITIATED 10:00:23 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 324 TO ITERATE

100.0% PROCESSED 324 ITERATIONS 102 ANSWERS  
SEARCH TIME: 00.00.01

L7 102 SEA SSS FUL L5

=> FIL CAPLUS

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	148.15	302.71
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-0.65

FILE 'CAPLUS' ENTERED AT 10:00:27 ON 02 OCT 2003  
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<N02/10/2003Page 13 10:01 <golam sha <mm/dd/yyyy

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FILE COVERS 1907 - 2 Oct 2003 VOL 139 ISS 14  
FILE LAST UPDATED: 1 Oct 2003 (20031001/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l7

L8 123 L7

=> s l8 and p/dt

4189135 P/DT

L9 44 L8 AND P/DT

=> s l9 and us/pc

1220494 US/PC

L10 25 L9 AND US/PC

=> s l10 and py<=1998

18916705 PY<=1998

L11 15 L10 AND PY<=1998

=> d l11 ibib abs hitstr tot

L11 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1998:672556 CAPLUS

DOCUMENT NUMBER: 129:260569

TITLE: Preparation of tertiary phosphines via  
nickel-catalyzed cross coupling

INVENTOR(S): Laneman, Scott A.; Ager, David J.; Eisenstadt, Amihia

PATENT ASSIGNEE(S): Monsanto Company, USA

SOURCE: PCT Int. Appl., 23 pp.

CODEN: PIXXD2

DOCUMENT TYPE: **Patent**

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9842716	A1	19981001	WO 1998-US6003	19980326 <--
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
US 5874628	A	19990223	US 1997-824309	19970326 <--
AU 9867782	A1	19981020	AU 1998-67782	19980326 <--
EP 973784	A1	20000126	EP 1998-913165	19980326

09924591

EP 973784 B1 20020116

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, SI, LT, LV, FI, RO

AT 212028 E 20020215

AT 1998-913165 19980326

JP 2002515062 T2 20020521

JP 1998-546001 19980326

US 5902904 A 19990511

US 1998-138004 19980821 <--

PRIORITY APPLN. INFO.:

US 1997-824309 A 19970326

WO 1998-US6003 W 19980326

OTHER SOURCE(S): CASREACT 129:260569; MARPAT 129:260569

AB The invention is an improved method for the prepn. of tertiary phosphines by way of cross-coupling of aryl, alkenyl, cycloalkenyl or aralkyl halides or aryl, alkenyl, cycloalkenyl or aralkyl sulfonate esters with chlorophosphines in the presence of a catalyst and a reductant. Thus, nickel-catalyzed reaction of R1Xn with ClPR2R3 in the presence of a reductant gave title compds., R1(PR2R3)n, (R1 = aryl, alkenyl, cycloalkenyl, aralkyl, any of which may be substituted by one or more of the following: alkyl, aryl, aralkyl, alkoxy, alkanoyl, chloro, fluoro, alkoxy carbonyl, cyano, trifluoromethyl, cycloalkyl, or CONR4R5 wherein R4 and R5 are independently hydrogen, alkyl, aryl or aralkyl; R2 and R3 are independently aryl, alkyl, aralkyl, any of which may be substituted by one or more of the following: alkyl, aryl, aralkyl, alkoxy, alkanoyl, chloro, fluoro, alkoxy carbonyl, cyano, trifluoromethyl, cycloalkyl or CONR4R5 wherein R4 and R5 are independently hydrogen, alkyl, aryl or aralkyl; n = 2 where R1 is a difunctional moiety and 1 for any other R1; X = Cl, Br, I, OSO2Y; Y = alkyl, trihalomethyl, Ph, halophenyl, or alkylphenyl).

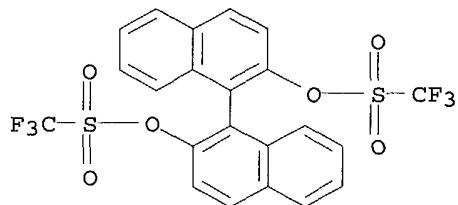
IT 128544-05-8 128575-34-8

RL: RCT (Reactant); RACT (Reactant or reagent)

(prepn. of tertiary phosphines via nickel-catalyzed cross coupling)

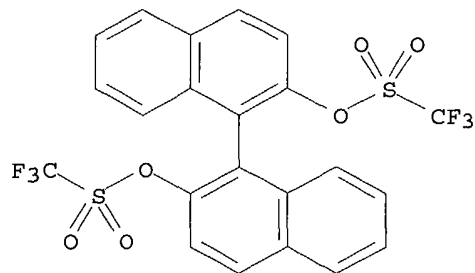
RN 128544-05-8 CAPLUS

CN Methanesulfonic acid, trifluoro-, (1S)-[1,1'-binaphthalene]-2,2'-diyl ester (9CI) (CA INDEX NAME)



RN 128575-34-8 CAPLUS

CN Methanesulfonic acid, trifluoro-, [1,1'-binaphthalene]-2,2'-diyl ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1998:618676 CAPLUS

DOCUMENT NUMBER: 129:245667

TITLE: Optically active phosphine derivative having at least two vinyl groups, polymer produced using the same as monomer and transition metal complexes of these

INVENTOR(S): Tamao, Kyoko; Itoi, Yohei

PATENT ASSIGNEE(S): Takasago International Corp., Japan

SOURCE: Eur. Pat. Appl., 26 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 864577	A2	19980916	EP 1998-301763	19980310 <--
EP 864577	A3	19990825		
EP 864577	B1	20030205		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 10251282	A2	19980922	JP 1997-72817	19970311 <--
US 6143834	A	20001107	US 1998-38280	19980311 <--
US 6248848	B1	20010619	US 2000-603991	20000627 <--
PRIORITY APPLN. INFO.:			JP 1997-72817	A 19970311
			US 1998-38280	A3 19980311

OTHER SOURCE(S): MARPAT 129:245667

AB Specified 2'-diarylphosphino-1,1'-biphenylen-2-yloxy(6,6'-divinyl-1,1'-binaphthalene -2,2'-diyl)phosphine derivs. are useful in polymers and transition metal complexes. Also disclosed are a polymer having structural units derived from the phosphine deriv. and a transition metal complex obtained by causing a transition metal compd. to act on the phosphine deriv. or the polymer. A novel polymer-supported ligand is provided which, when used as a catalyst for asym. syntheses, gives satisfactory results concerning catalytic activity, enantiomer excess, etc.

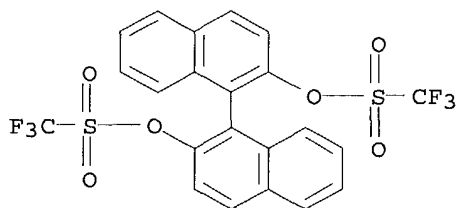
IT 126613-06-7P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(optically active phosphine deriv. having at least two vinyl groups, polymer produced using the same as monomer and transition metal complexes of these)

RN 126613-06-7 CAPLUS

CN Methanesulfonic acid, trifluoro-, (1R)-[1,1'-binaphthalene]-2,2'-diyl ester (9CI) (CA INDEX NAME)



L11 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1998:614290 CAPLUS

DOCUMENT NUMBER: 129:316694

TITLE: Preparation of vinyl-containing chiral phosphines, their polymers, and their transition metal complexes as catalysts for asymmetric hydroformylation

INVENTOR(S): Tamao, Kyoko; Itoi, Yohei

PATENT ASSIGNEE(S): Takasago Perfumery Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DOCUMENT TYPE:

Patent

LANGUAGE:

Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10251283	A2	19980922	JP 1997-72838	19970311 <--
EP 877029	A2	19981111	EP 1998-301768	19980310 <--
EP 877029	A3	19990825		
EP 877029	B1	20021211		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

US 6022936 A 20000208

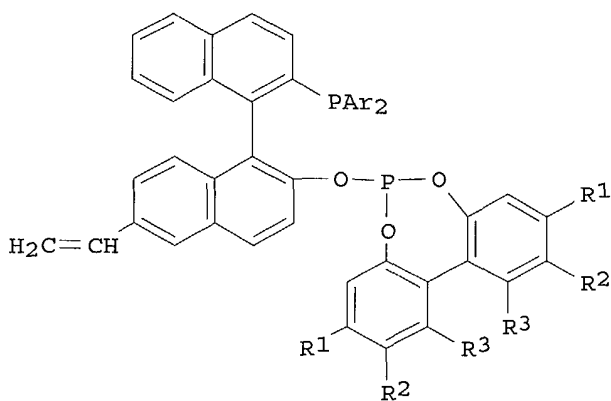
US 1998-38131 19980311 <--

PRIORITY APPLN. INFO.:

JP 1997-72838 A 19970311

OTHER SOURCE(S): MARPAT 129:316694

GI



I

AB Title phosphines I [Ar = (substituted) Ph, (substituted) naphthyl; R1, R2

09924591



= H, lower (halo)alkyl, lower alkoxy, halo, benzyloxy; R3 = lower (halo)alkyl, lower alkoxy, halo, benzyloxy; R2, R3 may form hydrocarbon ring], their transition metal complexes, polymers or oligomers prepd. by soln. or suspension polymn. of I, and transition metal complexes of the polymers or oligomers are prepd. Optically active R5CHMeCHO [R5 = C1-8 alkyl, (substituted) Ph, naphthyl, acetoxy, etc.] are prepd. by asym. hydroformylation of R5CH:CH2 (R5 = same as above) using the polymer transition metal complexes. Condensation of (R)-2'-diphenylphosphino-2-hydroxy-6-vinyl-1,1'-binaphthyl (prepn. given) with (S)-1,1'-binaphthalene-2,2'-dioxychlorophosphine in ether in the presence of Et3N at room temp. for 24 h gave 69% optically active I (Ar = Ph, R1 = H, R2-R3 = CH:CHCH:CH), which was polymd. with styrene and divinylbenzene and treated with Rh(acac)(CO)2 to give a complex. Styrene was hydroformylated by CO and H in C6H6 using the complex at 60.degree. under 50 atm for 40 h to give PhCHMeCHO with 94% selectivity and 82% ee optical purity at 97% conversion.

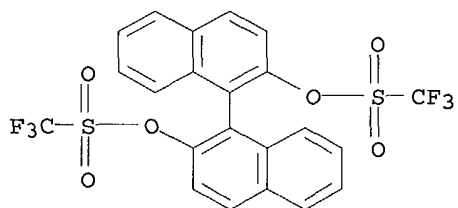
IT 126613-06-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of vinyl-contg. chiral phosphines for polymeric transition metal complexes as catalysts for asym. hydroformylation)

RN 126613-06-7 CAPLUS

CN Methanesulfonic acid, trifluoro-, (1R)-[1,1'-binaphthalene]-2,2'-diyl ester (9CI) (CA INDEX NAME)



L11 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1998:304138 CAPLUS

DOCUMENT NUMBER: 129:16234

TITLE: Preparation of optically active binaphthyl and octahydrobinaphthyl bis(phosphine) ligands

INVENTOR(S): Zhang, Xiaoyaong; Sayo, Noboru

PATENT ASSIGNEE(S): Takasago International Corp., Japan

SOURCE: Eur. Pat. Appl., 17 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

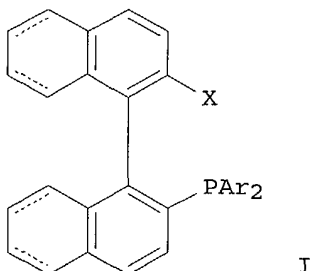
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 839819	A1	19980506	EP 1997-402528	19971024 <--
EP 839819	B1	20030917		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 10120692	A2	19980512	JP 1996-282157	19961024 <--
JP 3445451	B2	20030908		
US 5922918	A	19990713	US 1997-957020	19971024 <--

PRIORITY APPLN. INFO.: JP 1996-282157 A 19961024  
OTHER SOURCE(S): CASREACT 129:16234; MARPAT 129:16234  
GI



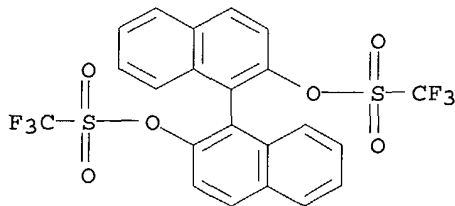
AB Compd. I (X = PAr<sub>2</sub>), ligand of a catalyst complex useful for asym. syntheses, was prepd. in an economical way by reacting compd. I (X = OTf) with phosphine oxides Ar<sub>2</sub>P(O)H in the presence of a transition metal/phosphine complex. In I, the double line consisting of a continuous line and a dotted line signifies either a double bond or a single bond, resp. forming part of a naphthalene ring or an octahydronaphthalene ring depending on whether the naphthalene ring was subjected to the redn. or not; Tf represents a trifluoromethanesulfonyl group; and Ar represents a Ph group, a substituted Ph group (bearing 1 to 3 substituents which may be the same or different and are selected from the group consisting of halogen atoms, lower alkyl group, lower alkoxy group and halogenated lower alkyl group) or a naphthyl group which may bear a lower alkyl or lower alkoxy substituent. For example, (S)-2,2'-bis(trifluoromethanesulfonyloxy)-1,1'-binaphthyl was reacted with bis(2-naphthyl)phosphine oxide in the presence of Pd(OAc)<sub>2</sub>, Ph<sub>2</sub>P(CH<sub>2</sub>)<sub>3</sub>PPh<sub>2</sub>, NaO<sub>2</sub>CH and iPr<sub>2</sub>EtN in DMSO to give 75% (S)-2-bis(2-naphthyl)phosphinyl-2'-(trifluoromethanesulfonyloxy)-1,1'-binaphthyl (1). 1 Was reduced to the phosphino analog (2) using Cl<sub>3</sub>SiH and dimethylaniline in toluene in 84% yield. 2 Was substituted with bis(2-naphthyl)phosphine oxide in DMF in the presence of Ni(dppe)Cl<sub>2</sub> and DABCO to give 56% (S)-2-bis(2-naphthyl)phosphino-2'-bis(2-naphthyl)phosphinyl-1,1'-binaphthyl (3). 3 Was reduced similarly to 1 to give (S)-2,2'-bis(bis(2-naphthyl)phosphino)-1,1'-binaphthyl in 87% yield.

IT 126613-06-7, (R)-2,2'-Bis(trifluoromethanesulfonyloxy)-1,1'-binaphthyl

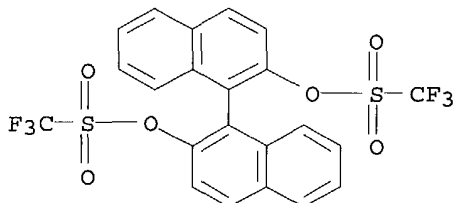
RL: RCT (Reactant); RACT (Reactant or reagent)  
(for prepn. of optically active bis(phosphine))

RN 126613-06-7 CAPLUS

CN Methanesulfonic acid, trifluoro-, (1R)-[1,1'-binaphthalene]-2,2'-diyl ester (9CI) (CA INDEX NAME)



IT **128544-05-8P**, (S)-2,2'-Bis(trifluoromethanesulfonyloxy)-1,1'-binaphthyl  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(intermediate for prepn. of optically active bis(phosphine))  
RN 128544-05-8 CAPLUS  
CN Methanesulfonic acid, trifluoro-, (1S)-[1,1'-binaphthalene]-2,2'-diyl ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

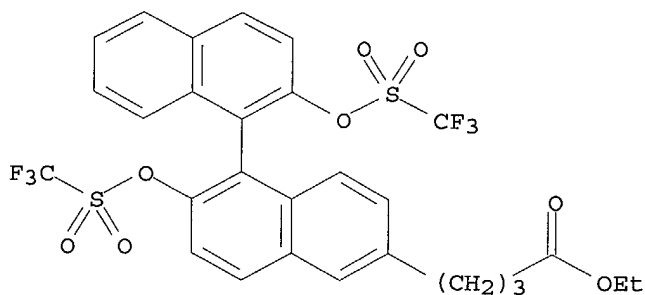
L11 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2003 ACS on STN  
ACCESSION NUMBER: 1998:197508 CAPLUS  
DOCUMENT NUMBER: 128:244192  
TITLE: Preparation of chiral 2,2-bis(diphenylphosphino)-1,1'-binaphthyl analogs as ligands for asymmetric hydrogenation catalysts  
INVENTOR(S): Polywka, Mario Eugenio Cosamino; Moses, Edwin; Bayston, Daniel John; Baxter, Anthony David; Ashton, Mark Richard  
PATENT ASSIGNEE(S): Oxford Asymmetry Limited, UK; Polywka, Mario Eugenio Cosamino; Moses, Edwin; Bayston, Daniel John; Baxter, Anthony David; Ashton, Mark Richard  
SOURCE: PCT Int. Appl., 79 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9812202	A1	19980326	WO 1997-GB2556	19970922 <--
W: JP, US				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 938488	A1	19990901	EP 1997-941092	19970922
EP 938488	B1	20020102		
R: CH, DE, ES, FR, GB, IT, LI, NL, SE				
JP 2000507604	T2	20000620	JP 1998-514410	19970922
ES 2170963	T3	20020816	ES 1997-941092	19970922
US 6162951	A	20001219	US 1999-272300	19990319 <--
PRIORITY APPLN. INFO.:			GB 1996-19684	A 19960920
			WO 1997-GB2556	W 19970922

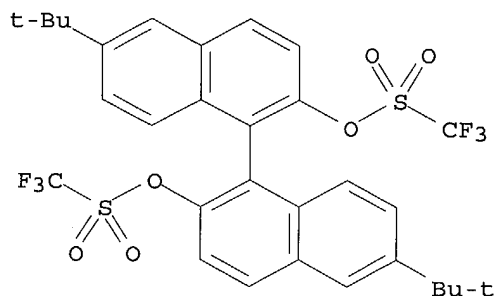
OTHER SOURCE(S): MARPAT 128:244192

AB Approx. 10 BINAP analogs were prepd. and with transition metal complexes were used as asym. hydrogenation catalysts. E.g., aminomethylpolystyrene supported (R)-6-(3-carboxypropyl)BINAP and bis(methallyl)-1,5-cyclooctadieneruthenium were used to hydrogenated Me propionylacetate to

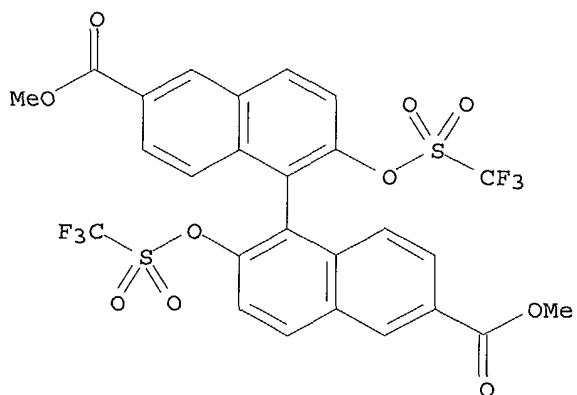
give the .beta.-hydroxy ester in 96.9% ee.  
IT 205107-30-8P 205107-35-3P 205107-41-1P  
205107-46-6P 205107-50-2P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(prepn. of polymer-supported BINAP analogs as asym. hydrogenation  
catalysts)  
RN 205107-30-8 CAPLUS  
CN [1,1'-Binaphthalene]-6-butanoic acid, 2,2'-bis[[trifluoromethylsulfonyl]  
oxy]-, ethyl ester, (R)- (9CI) (CA INDEX NAME)



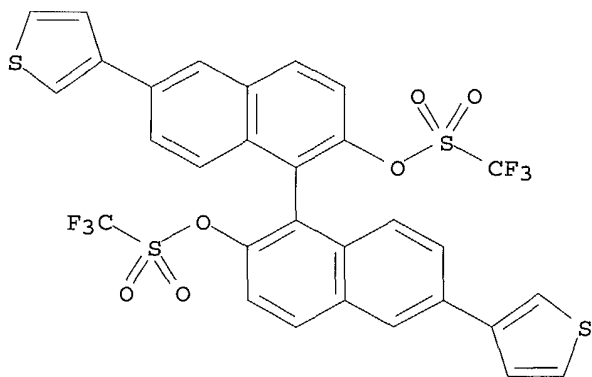
RN 205107-35-3 CAPLUS  
CN Methanesulfonic acid, trifluoro-, 6,6'-bis(1,1-dimethylethyl) [1,1'-  
binaphthalene]-2,2'-diyl ester, (R)- (9CI) (CA INDEX NAME)



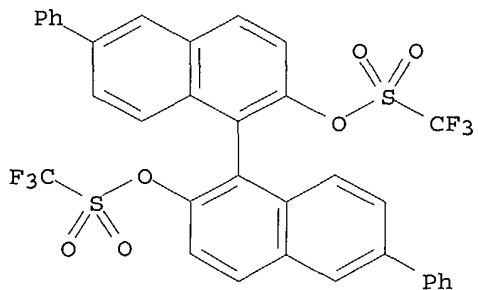
RN 205107-41-1 CAPLUS  
CN [1,1'-Binaphthalene]-6,6'-dicarboxylic acid, 2,2'-  
bis[[trifluoromethylsulfonyl]oxy]-, dimethyl ester, (R)- (9CI) (CA  
INDEX NAME)



RN 205107-46-6 CAPLUS  
 CN Methanesulfonic acid, trifluoro-, 6,6'-di-3-thienyl[1,1'-binaphthalene]-  
 2,2'-diyl ester, (R)- (9CI) (CA INDEX NAME)



RN 205107-50-2 CAPLUS  
 CN Methanesulfonic acid, trifluoro-, 6,6'-diphenyl[1,1'-binaphthalene]-2,2'-  
 diyl ester, (R)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1997:696765 CAPLUS

DOCUMENT NUMBER: 127:358957

TITLE: Preparation of water-soluble sulfonated aryl bis(phosphine)s and catalytic activity of their transition metal complexes

INVENTOR(S): Kohlpaintner, Christian W.; Hanson, Brian E.; Ding, Hao

PATENT ASSIGNEE(S): Hoechst Celanese Corporation, USA

SOURCE: PCT Int. Appl., 65 pp.

CODEN: PIXXD2

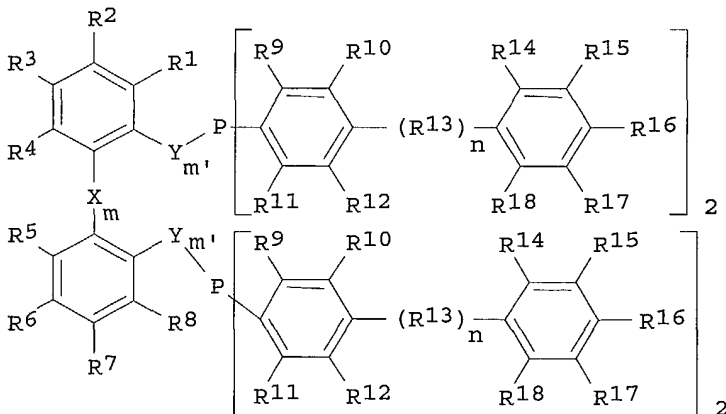
DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9739005	A1	19971023	WO 1997-US5258	19970331 <--
W: JP				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5777087	A	19980707	US 1996-634487	19960418 <--
EP 898573	A1	19990303	EP 1997-917748	19970331
R: DE, FR, GB, IT				
JP 2000508656	T2	20000711	JP 1997-537113	19970331
PRIORITY APPLN. INFO.:			US 1996-634487	A 19960418
			WO 1997-US5258	W 19970331
OTHER SOURCE(S):			CASREACT 127:358957; MARPAT 127:358957	
GI				



I

AB Water-sol. sulfonated aryl bis(phosphine)s I are claimed. In I, X and Y = C1-20 alkyl, alkenyl or alkynyl, Ph, naphthyl, NR (R = H, C1-20 alkyl, phenyl), O, S; m and m' = 0, 1; R1-R8 = H, halogen, nitro, amino, C1-20 alkyl, alkoxy, OH, CO2R, CN, SO3M, NR3+X- (X = halide), aryl; R1 and R2, R2 and R3, R3 and R4, R5 and R6, R6 and R7, R7 and R8 may also form a cyclic ring contg. a total of 2-6 atoms selected from C, O, N, S and

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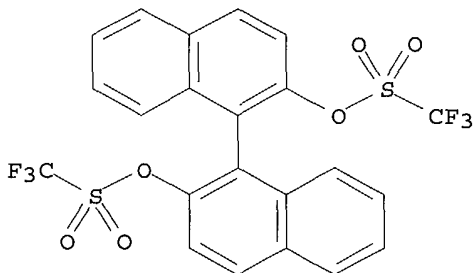
mixts. thereof; R9-R12 and R14-R18 = H, halogen, SO<sub>3</sub>M, C1-20 alkyl, CO<sub>2</sub>M, NR<sub>3</sub>+X<sup>-</sup>, CN, OR, CO<sub>2</sub>R, PR<sub>2</sub>; R13 = C1-20 alkyl, alkenyl, alkynyl, Ph, naphthyl, anthracyl; n = 1-20; M = alkali, alk. earth metal, NR<sub>4</sub><sup>+</sup>; R = H, C1-20 alkyl, Ph. I can be complexed with a transition metal to form a novel two-phase catalyst useful in such applications as hydroformylation and asym. hydrogenation. For example, 1-octene was hydroformylated in the presence of a Rh complex of tetrasulfonated 2,2'-bis(bis(4-(3-phenylpropyl)phenyl)phosphinomethyl)-1,1'-biphenyl giving 74% C<sub>9</sub> aldehydes, 93% of which was 1-nonanal. As another example, acetophenone N-benzylimine was hydrogenated by a Rh complex of (R)-2,2'-bis(bis(4-(3-(4-sulfonatophenyl)propyl)phenyl)phosphino)-1,1'-binaphthalene with 98% yield and 56% ee.

IT 128575-34-8

RL: RCT (Reactant); RACT (Reactant or reagent)  
(for prepn. of water-sol. sulfonated aryl bis(phosphine)s)

RN 128575-34-8 CAPLUS

CN Methanesulfonic acid, trifluoro-, [1,1'-binaphthalene]-2,2'-diyl ester (9CI) (CA INDEX NAME)

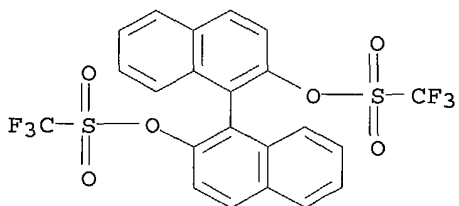


IT 126613-06-7P, (R)-2,2'-Bis(trifluoromethanesulfonyloxy)-1,1'-binaphthalene

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(intermediate; for prepn. of water-sol. sulfonated aryl bis(phosphine)s)

RN 126613-06-7 CAPLUS

CN Methanesulfonic acid, trifluoro-, (1R)-[1,1'-binaphthalene]-2,2'-diyl ester (9CI) (CA INDEX NAME)



L11 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1997:433402 CAPLUS

DOCUMENT NUMBER: 127:50792

TITLE: Method for producing optically active diphosphines for use as ligands of ruthenium and rhodium asym.

hydrogenation catalysts  
INVENTOR(S): Sayo, Noboru; Zhang, Xiaoyong; Oh, Tatsuya; Yoshida, Akifumi; Yokozawa, Tohru  
PATENT ASSIGNEE(S): Takasago International Corporation, Japan  
SOURCE: Eur. Pat. Appl., 19 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 771812	A1	19970507	EP 1996-402306	19961030 <--
R: CH, DE, FR, GB, IT, LI, NL				
JP 09124669	A2	19970513	JP 1995-305211	19951031 <--
US 5693868	A	19971202	US 1996-740506	19961030 <--
PRIORITY APPLN. INFO.:			JP 1995-305211	19951031

OTHER SOURCE(S): CASREACT 127:50792

AB The present invention provides a method for producing novel optically active diphosphine compds. [e.g., 2,2'-bis(di-substituted phosphino)-1,1'-binaphthyl compds.] that have selectivity such as chemoselectivity or enantioselectivity and catalytic activity different from those possessed by conventional BINAP compds. In a method of the present invention for producing an optically active diphosphine compd., i. e. 2,2-bis(di-substituted phosphino)-1,1'-binaphthyl, 2,2'-bis(trifluoromethanesulfonyloxy)-1,1'-binaphthyl (1) is reacted, in the presence of a transition metal-phosphine complex, with a phosphine oxide compd. expressed by the following general formula, A2P(O)H wherein A indicates a Ph group; a mono- to trisubstituted Ph group, wherein each substituent in the substituted Ph group is individually selected from halogen atoms, lower alkyl groups, lower alkoxy groups or lower halogenated-alkoxy groups such that one or more of the substituents may be the same or different; a naphthyl group; a lower-alkyl naphthyl group; or a lower-alkoxy naphthyl group. E.g., (S)-1 reacts with NiCl<sub>2</sub>(dppe) and N-methylpiperidine in DMF solvent at room temp. for 15 mins. and 100.degree. for another 15 mins. followed by addn. of di(2-naphthyl)phosphine oxide to give (S)-2-di(2-naphthyl)phosphinyl-2'-di(2-naphthyl)phosphino-1,1'-binaphthyl (2) in 40% yield. 2 is reduced by Cl<sub>3</sub>SiH/dimethylaniline/toluene to give (S)-2,2'-bis[di(2-naphthyl)phosphino]-1,1'-binaphthyl (3) in 87% yield. 3 reacts with [Ru(p-cymene)I<sub>2</sub>]<sub>2</sub> to give [RuI(p-cymene)(3)]I which catalyzes the asym. redn. of Me 2-benzamidemethyl-3-oxobutyrate to give syn and anti-alcs. in 87:13 ratio.

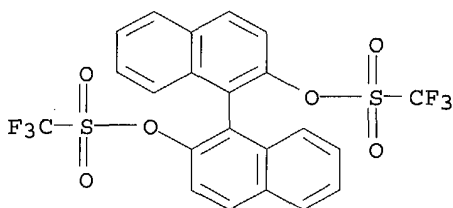
IT 126613-06-7

RL: RCT (Reactant); RACT (Reactant or reagent)  
(coupling reaction with di-substituted phosphine oxide in the presence of transition metal catalyst to give optically active diphosphine)

RN 126613-06-7 CAPLUS

CN Methanesulfonic acid, trifluoro-, (1R)-[1,1'-binaphthalene]-2,2'-diyl ester (9CI) (CA INDEX NAME)



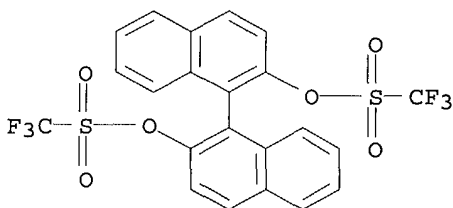


IT 128544-05-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and coupling reaction with disubstituted phosphine oxide in the presence of transition metal catalyst to give optically active diphosphine)

RN 128544-05-8 CAPLUS

CN Methanesulfonic acid, trifluoro-, (1S)-[1,1'-binaphthalene]-2,2'-diyl ester (9CI) (CA INDEX NAME)



L11 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1997:204039 CAPLUS

DOCUMENT NUMBER: 126:199669

TITLE: Chiral unsymmetric diphosphine compounds and transition metal complexes containing them as ligands  
INVENTOR(S): Sayo, Noboru; Zhang, Xiaoyong; Omoto, Tatsuya; Yokozawa, Tohru; Yamasaki, Tetsuro; Kumobayashi, Hidenori

PATENT ASSIGNEE(S): Takasago International Corporation, Japan

SOURCE: Eur. Pat. Appl., 16 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

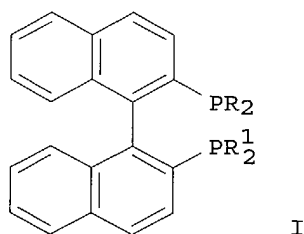
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 754696	A1	19970122	EP 1996-305305	19960719 <--
EP 754696	B1	20020116		
R: CH, DE, FR, GB, IT, LI				
JP 09031084	A2	19970204	JP 1995-206696	19950721 <--
JP 3338243	B2	20021028		
US 5808162	A	19980915	US 1996-683199	19960718 <--
			JP 1995-206696 A	19950721

PRIORITY APPLN. INFO.:

OTHER SOURCE(S): CASREACT 126:199669; MARPAT 126:199669

GI



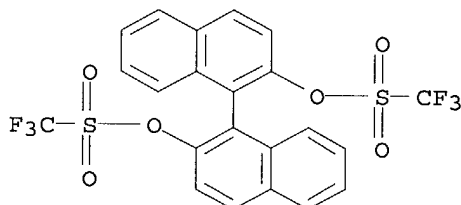
AB Novel chiral unsym. diphosphine compds. I, wherein R and R<sup>1</sup>, which are different from each other, each represent a substituted or unsubstituted Ph group, a substituted or unsubstituted naphthyl group, a pyridyl group, a quinolyl group, an isoquinolyl group, a furfuryl group, a benzofurfuryl group, a thienyl group, or a benzothienyl group were prepd. Transition metal complexes contg. the diphosphine compds. as ligands, where the complex catalyzes various asym. synthesis reactions, e.g., asym. hydrogenation or asym. hydrosilylation, exhibiting excellent performance in selectivity, conversion and catalytic activity, to provide a product of desired abs. configuration at high optical purity and in high yield were also prepd.

IT **128544-05-8P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(in prepn. of diphosphinobinaphthyl compd.)

RN 128544-05-8 CAPLUS

CN Methanesulfonic acid, trifluoro-, (1S)-[1,1'-binaphthalene]-2,2'-diyl ester (9CI) (CA INDEX NAME)

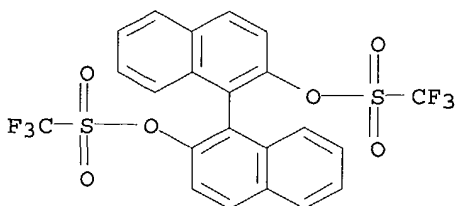


IT **126613-06-7**

RL: RCT (Reactant); RACT (Reactant or reagent)  
(in prepn. of diphosphinobinaphthyl compds.)

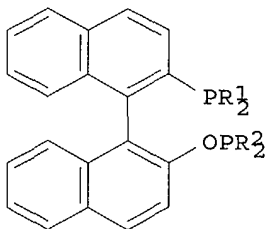
RN 126613-06-7 CAPLUS

CN Methanesulfonic acid, trifluoro-, (1R)-[1,1'-binaphthalene]-2,2'-diyl ester (9CI) (CA INDEX NAME)

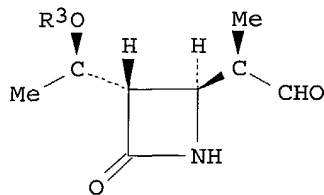


L11 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 1997:195644 CAPLUS  
 DOCUMENT NUMBER: 126:186205  
 TITLE: Preparation of chiral binaphthalene phosphine-phosphinite compounds and their use in asymmetric synthesis of 4-[(R)-1'-formylethyl]azetidin-2-one derivatives by hydroformylation  
 INVENTOR(S): Saito, Takao; Matsumura, Kazuhiko; Miura, Takashi; Kumobayashi, Hidenori; Yoshida, Akifumi  
 PATENT ASSIGNEE(S): Takasago International Corporation, Japan  
 SOURCE: Eur. Pat. Appl., 26 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 755937	A1	19970129	EP 1996-305182	19960715 <--
EP 755937	B1	20021023		
R: CH, DE, FR, GB, IT, LI, NL				
JP 09040684	A2	19970210	JP 1995-210215	19950727 <--
US 5824822	A	19981020	US 1996-677226	19960709 <--
PRIORITY APPLN. INFO.:			JP 1995-210215	A 19950727
OTHER SOURCE(S):			CASREACT 126:186205; MARPAT 126:186205	
GI				



I



II

AB Phosphine-phosphinite compds. (R)-I (R1, R2 = substituted or unsubstituted Ph, naphthyl) and a process for prepg. a 4-[(R)-1'-formylethyl]azetidin-2-one deriv. II (R3 = H, protective group for a hydroxyl group) using (R)-I are claimed. (R)-I, either in combination, or as a complex, with a transition metal compd., is useful as a catalyst for asym. hydroformylation and makes it possible to easily synthesize an important intermediate for carbapenem antibiotics or a precursor thereof at high

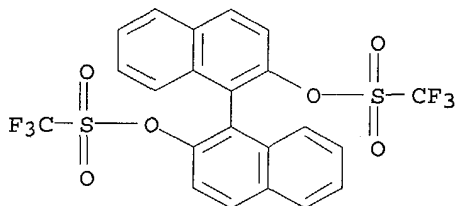
regioselectivity and diastereoselectivity. For example, (3S,4R)-3-((R)-1-tert-butyltrimethylsilyloxy)ethyl-4-((R)-1'-formylethyl)azetidin-2-one, (3S,4R)-3-((R)-1-tert-butyltrimethylsilyloxy)ethyl-4-((S)-1'-formylethyl)azetidin-2-one, and (3S,4R)-3-((R)-1-tert-butyltrimethylsilyloxy)ethyl-4-(2-formylethyl)azetidin-2-one were formed in 68.4/3.6/28 ratio and, after chromatog., a 68% yield of the 1st 2 compds. with 95/5 isomer ratio was obtained in the presence of (R)-I (R1 = 3,5-dimethylphenyl; R2 = Ph) and [Rh(COD)Cl]<sub>2</sub>; other phosphine-phosphinite compds. such as (R)-I (R1 = Ph; R2 = OPh) gave significantly inferior results. The detailed prepn. of (R)-I (R1 = 3,5-dimethylphenyl; R2 = Ph) is given and results of catalytic tests are given for about 20 (R)-I.

IT 126613-06-7P, (R)-2,2'-Bis(trifluoromethanesulfonyloxy)-1,1'-binaphthalene

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(for prepn. of binaphthalene phosphine-phosphinite compd. for asym. hydroformylation catalysis)

RN 126613-06-7 CAPLUS

CN Methanesulfonic acid, trifluoro-, (1R)-[1,1'-binaphthalene]-2,2'-diyl ester (9CI) (CA INDEX NAME)



L11 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1997:53936 CAPLUS

DOCUMENT NUMBER: 126:89568

TITLE: Method for producing 2,2'-bis(diphenylphosphino)-1,1'-binaphthyl (BINAP) derivatives

INVENTOR(S): Kai, Don Wie; Hughes, David L.; Lebeck, Sirban; Barhoven, Thomas R.

PATENT ASSIGNEE(S): Merck & Company Incorporated, USA

SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

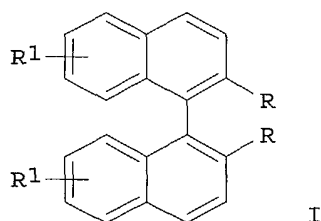
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08311090	A2	19961126	JP 1996-121938	19960516 <--
US 6333435	B1	20011225	US 1995-443616	19950518 <--

PRIORITY APPLN. INFO.: US 1995-443616 A 19950518

OTHER SOURCE(S): CASREACT 126:89568; MARPAT 126:89568

GI



AB The title compds. [I; R = PPh<sub>2</sub>; R<sub>1</sub> = C<sub>1</sub>-4 alkyl, (un)protected HO, C<sub>1</sub>-4 alkoxy, C<sub>1</sub>-4 acyl, (un)protected CO<sub>2</sub>H, C<sub>1</sub>-4 alkoxycarbonyl], which are useful as chiral ligands for catalytic asym. induction, are prepd. by reaction of sulfonate esters I (R = OSO<sub>2</sub>CF<sub>3</sub>, OSO<sub>2</sub>Me, OSO<sub>2</sub>C<sub>6</sub>H<sub>4</sub>Me-p) with diphenylphosphine in the presence of an amine base and a nickel catalyst. The nickel catalyst is selected from NiCl<sub>2</sub>.bis(diphenylphosphinyl)-C<sub>1</sub>-4 alkane, NiBr<sub>2</sub>, NiCl<sub>2</sub>, NiCl<sub>2</sub>.bis(diphenylphosphinyl)ferrocene (II), NiCl<sub>2</sub>.bis(triphenylphosphine), Ni.tetrakis(triphenylphosphine), Ni.tetrakis(triphenylphosphite), and Ni.dicarbonylbis(triphenylphosphine). The amine base is selected from 1,4-diazabicyclo[2.2.2]octane (DABCO), Et<sub>3</sub>N, diisopropylethylamine, tri(n-propyl)amine, and tri(n-butyl)amine. This reaction is carried out in DMF, MeCN, and N-methylpyrrolidinone without racemization. Thus, I (R = OH, R<sub>1</sub> = 7- and 7'-OMe) was triflated by triflic anhydride in pyridine at 0.degree. for 3 h to give I (R = OSO<sub>2</sub>CF<sub>3</sub>, R<sub>1</sub> = 7- and 7'-OMe) (III). Ph<sub>2</sub>PH (4.7 mmol) was added to a soln. of 1.6 mmol II in 15 mL DMF and heated at 100.degree. for 30 min, followed by adding a soln. of 8.18 mmol III and 32.8 mmol DABCO in DMF, and the resulting mixt. was heated at 100.degree. in dark overnight, while adding twice diphenylphosphine after 1.5 and 4.5 h, to give I (R = PPh<sub>2</sub>, R<sub>1</sub> = 7- and 7'-OMe).

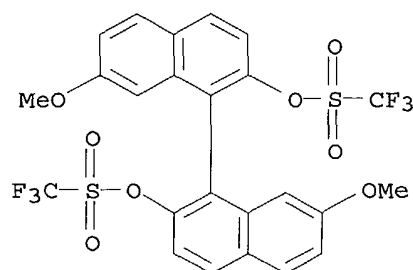
IT **185341-95-1P 185341-96-2P 185341-97-3P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of bis(diphenylphosphino)binaphthyl (BINAP) derivs. by coupling of dihydroxybinaphthyl disulfonate esters with diphenylphosphine)

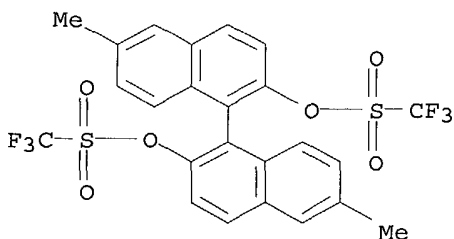
RN 185341-95-1 CAPLUS

CN Methanesulfonic acid, trifluoro-, 7,7'-dimethoxy[1,1'-binaphthalene]-2,2'-diyl ester (9CI) (CA INDEX NAME)

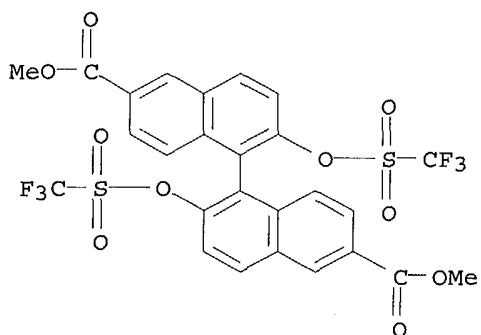


RN 185341-96-2 CAPLUS

CN Methanesulfonic acid, trifluoro-, 6,6'-dimethyl[1,1'-binaphthalene]-2,2'-diyl ester (9CI) (CA INDEX NAME)

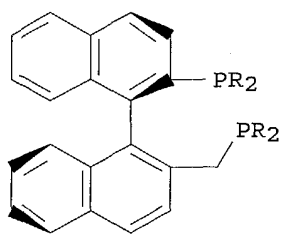


RN 185341-97-3 CAPLUS  
CN [1,1'-Binaphthalene]-6,6'-dicarboxylic acid, 2,2'-bis[[trifluoromethylsulfonyl]oxy]-, dimethyl ester (9CI) (CA INDEX NAME)

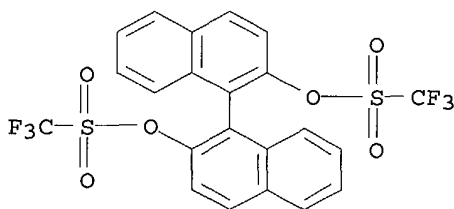


L11 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2003 ACS on STN  
ACCESSION NUMBER: 1996:618808 CAPLUS  
DOCUMENT NUMBER: 125:248106  
TITLE: Optically active asymmetric diphosphines and process for producing optically active substance in its presence  
INVENTOR(S): Takaya, Hidemasa; Ota, Tetsuo; Inagaki, Koji  
PATENT ASSIGNEE(S): Takasago International Corporation, Japan  
SOURCE: Eur. Pat. Appl., 11 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 732337	A1	19960918	EP 1996-301720	19960313 <--
EP 732337	B1	20000906		
R: CH, DE, FR, GB, IT, LI				
JP 08245664	A2	19960924	JP 1995-80836	19950314 <--
US 5648548	A	19970715	US 1996-615001	19960313 <--
PRIORITY APPLN. INFO.:			JP 1995-80836	A 19950314
OTHER SOURCE(S):		CASREACT 125:248106; MARPAT 125:248106		
GI				



- AB An optically active 2-diphenylphosphinomethyl-2'-diphenylphosphino-1,1'-binaphthalene deriv. represented by the general formula (I) wherein R represents a Ph group, a tolyl group, an anisyl group or a chlorophenyl group, and a process for the prodn. of optically active substances in which the above compd. and a transition metal compd. were used is described. The asym. diphosphine of the present invention is related to the creation of novel compds., which is excellent as a ligand for asym. synthesis use. When the above compds. were used together with a transition metal compd. such as of Ru, Rh or the like, it shows markedly excellent properties as a catalyst of asym. hydrogenation and the like reactions, in terms of selectivity, conversion ratio, catalytic activity and the like.
- IT **126613-06-7P**, (R)-2,2'-Bis(trifluoromethanesulfonyloxy)-1,1'-binaphthyl  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (prepn. and bis(diphenylphosphino)binaphthalene from)
- RN 126613-06-7 CAPLUS
- CN Methanesulfonic acid, trifluoro-, (1R)-[1,1'-binaphthalene]-2,2'-diyl ester (9CI) (CA INDEX NAME)



- L11 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2003 ACS on STN
- ACCESSION NUMBER: 1996:447108 CAPLUS
- DOCUMENT NUMBER: 125:143006
- TITLE: Preparation of phosphine compounds as cocatalysts and their complexes as catalysts for producing optically active aldehyde or the use of 4-[(R)-1'-formylethyl]azetidin-2-one derivatives as cocatalysts
- INVENTOR(S): Takaya, Hidemasa; Sakai, Nozomu; Tamao, Kyoko; Mano, Satoshi; Kumobayashi, Hidenori; Tomita, Tetsuo; Saito, Takao; Matsumura, Kazuhiko; Kato, Yasushi; Sayo, Noboru
- PATENT ASSIGNEE(S): Takasago International Corp., Japan
- SOURCE: U.S., 29 pp., Cont.-in-part of U.S. Ser. No. 209,069, abandoned.

CODEN: USXXAM

DOCUMENT TYPE:

**Patent**

LANGUAGE:

English

FAMILY ACC. NUM. COUNT: 5

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5530150	A	19960625	US 1994-323492	19941012 <--
JP 06263776	A2	19940920	JP 1993-52538	19930312 <--
JP 3313805	B2	20020812		
JP 06263681	A2	19940920	JP 1993-52539	19930312 <--
JP 06263777	A2	19940920	JP 1993-52540	19930312 <--
JP 2002128759	A2	20020509	JP 2001-328632	19940301

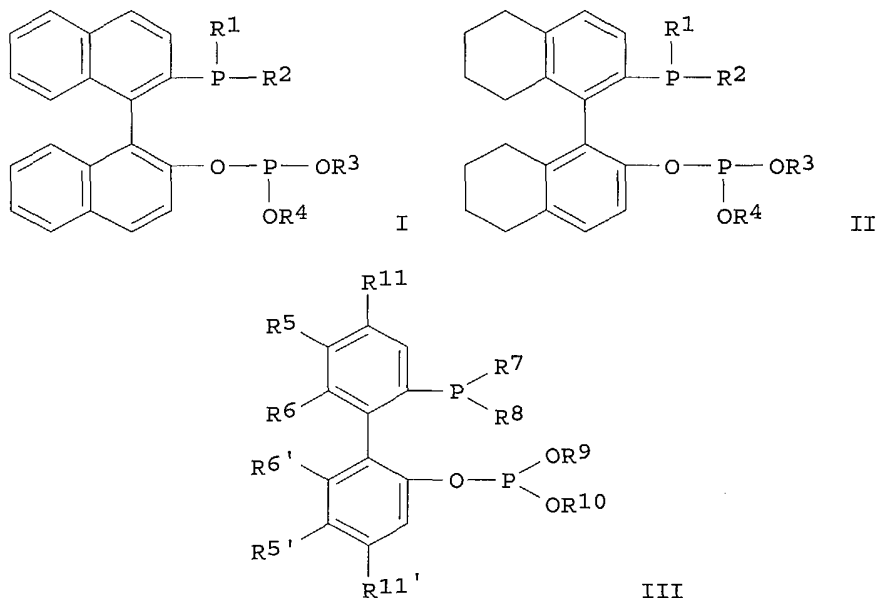
PRIORITY APPLN. INFO.:

JP 1993-52538	A	19930312
JP 1993-52539	A	19930312
JP 1993-52540	A	19930312
JP 1993-77484	A	19930312
US 1994-208378	B2	19940310
US 1994-209051	B2	19940311
US 1994-209069	B2	19940311
US 1994-209070	B2	19940311
JP 1994-54426	A3	19940301

OTHER SOURCE(S):

CASREACT 125:143006; MARPAT 125:143006

GI



AB The prepn. of phosphine compds. I-III (R1, R2 = same or different, each represent a Ph group or a Ph group substituted with a halogen atom or a lower alkyl group or taken together form a divalent hydrocarbon group; R3, R4 = same or different, each represent a lower alkyl group, a Ph group or a Ph group substituted with a halogen atom, a lower alkyl group or a lower



alkoxy group or taken together form a divalent hydrocarbon group; R6, R6' = same or different, each represent H, lower alkyl group or lower alkoxy group; R5, R5', R11, R11' = same or different, each represent H, lower alkyl group, lower alkoxy group, halogen atom; or a pair of R5 and R6 or a pair of R5' and R6' may form a ring; R7, R8 = same or different, each represent a Ph group or a Ph group substituted with a lower alkyl group, a halogen atom or a lower alkoxy group; R9, R10 = same or different, each represent a Ph group or a Ph group substituted with a lower alkyl group, a lower alkoxy group or a halogen atom; or R9 and R10 may be taken together to form a divalent hydrocarbon group) and their transition metal complexes, useful in the prepn. of optically active aldehydes, is described. Thus, title phosphine (R)-2-diphenylphosphino-1,1'-binaphthalene-2'-yloxy-((S)-1,1'-binaphthalene-2,2'-diyldioxy)phosphine [(R,S)-BINAPHOS] prep'd. in 5 steps starting from (R)-1,1'-bi-2-naphthol. [(R,S)-BINAPHOS]/Rh(CO)<sub>2</sub>(acac) catalyzed asym. hydroformylation of vinyl acetate gave 2-acetoxypromanal predominantly which upon Jones oxidn. gave (S)-(-)-2-acetoxypromionic acid with 99% enantiomeric excess.

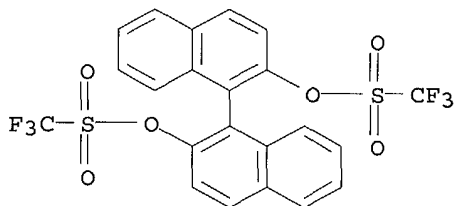
IT 126613-06-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of phosphine compds. as cocatalysts and its complexes as catalysts for producing optically active aldehyde)

RN 126613-06-7 CAPLUS

CN Methanesulfonic acid, trifluoro-, (1R)-[1,1'-binaphthalene]-2,2'-diyl ester (9CI) (CA INDEX NAME)



L11 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1995:716774 CAPLUS

DOCUMENT NUMBER: 123:144274

TITLE: Preparation of tertiary phosphines and their transition metal complexes as catalysts for asymmetric synthesis reactions

INVENTOR(S): Hayashi, Tamio; Uozumi, Yasuhiro; Iwakura, Kazunori; Kurimoto, Isao; Minai, Masayoshi

PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 21 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

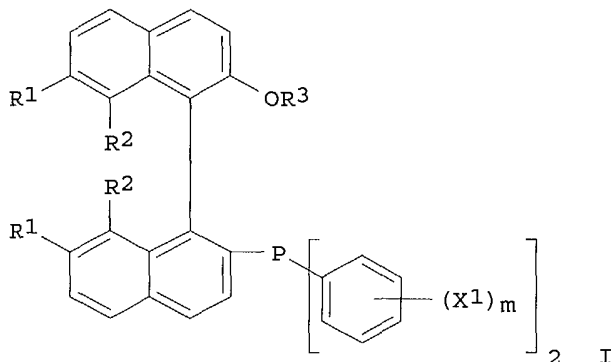
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 647647	A1	19950412	EP 1994-111780	19940728 <--
EP 647647	B1	20011024		
R: CH, DE, FR, GB, LI				
JP 07149776	A2	19950613	JP 1994-15341	19940209 <--

JP 07224073	A2	19950822	JP 1994-16760	19940210	<--
US 5523437	A	19960604	US 1994-280814	19940726	<--

PRIORITY APPLN. INFO.:

JP 1993-251635	A	19931007
JP 1994-15341	A	19940209
JP 1994-16760	A	19940210

OTHER SOURCE(S): MARPAT 123:144274  
GI



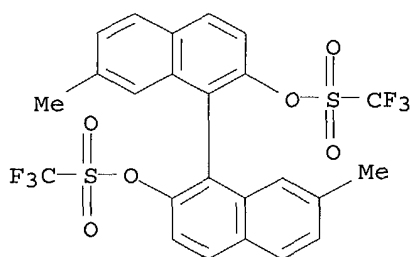
AB The prepn. of tertiary phosphine compd. I (R1, R2 = independently from each other a H, Me; R1R2 = CH:CHCH:CH; R3 = H, C5-7 cycloalkyl, lower alkyl group which may be substituted with halogen, lower alkoxy, lower alkoxyalkoxy, Ph; X1 = halogen atom when both R1 and R2 are hydrogens, hydrogen atom, halogen atom, lower alkyl group, lower alkoxy group when at least one of R1 and R2 is not a hydrogen atoms; m = 1-5), useful as ligand of a transition metal complex that can catalyze various reactions, is described. Thus, redn. of (R)-(+)-3-diphenylphosphinyl-3'-methoxy-4,4'-biphenanthryl (prepn. given) with HSiCl3 in the presence of Et3N gave title compd., (R)-(+)-3-diphenylphosphino-3'-methoxy-4,4'-biphenanthryl (II), which was used in asym. synthesis of .alpha.-olefins. Thus, tris(dibenzylideneacetone) (chloroform)dipalladium(0)-catalyzed reaction of geranylmethyl carbonate with formic acid in the presence of 1,8-bis(dimethylamino)naphthalene and chiral cocatalyst II gave (S)-3,7-dimethyl-1,6-octadiene.

IT 165730-03-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and phosphorylation of)

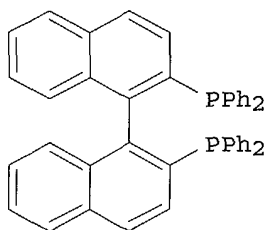
RN 165730-03-0 CAPLUS

CN Methanesulfonic acid, trifluoro-, 7,7'-dimethyl[1,1'-binaphthalene]-2,2'-diyl ester, (R)- (9CI) (CA INDEX NAME)



L11 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 1995:713768 CAPLUS  
 DOCUMENT NUMBER: 123:112409  
 TITLE: Preparation of binaphthyl phosphine derivatives  
 INVENTOR(S): Cai, Dongwei; Payack, Joseph F.; Verhoeven, Thomas R.  
 PATENT ASSIGNEE(S): Merck and Co., Inc., USA  
 SOURCE: U.S., 5 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5399771	A	19950321	US 1994-252306	19940601 <--
WO 9532934	A1	19951207	WO 1995-US6772	19950526 <--
W: AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, IS, JP, KG, KR, KZ, LK, LR, LT, LV, MD, MG, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TT, UA, US, UZ				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9526548	A1	19951221	AU 1995-26548	19950526 <--
JP 3000565	B2	20000117	JP 1996-501108	19950526 <--
JP 10501234	T2	19980203		
PRIORITY APPLN. INFO.:			US 1994-252306	A 19940601
			WO 1995-US6772	W 19950526
OTHER SOURCE(S):			CASREACT 123:112409	
GI				



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AB A process of synthesis of (BINAP), important chiral ligand for catalytic asym. induction, is described. Thus, [NiCl2(dppe)]-catalyzed

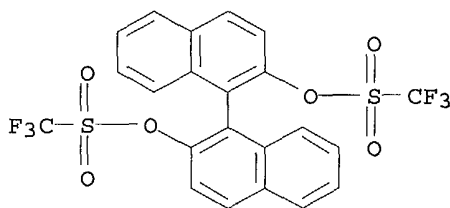
phosphinylation of (R)-ditriflate of 1,1'-bi-2-naphthol with Ph<sub>2</sub>PH in the presence of DABCO in DMF gave (R)-(+)-BINAP I.

IT 126613-06-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and phosphinylation of)

RN 126613-06-7 CAPLUS

CN Methanesulfonic acid, trifluoro-, (1R)-[1,1'-binaphthalene]-2,2'-diyl ester (9CI) (CA INDEX NAME)



L11 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1993:7190 CAPLUS

DOCUMENT NUMBER: 118:7190

TITLE: Preparation of optically active binaphthylphosphines as components of enantioselective hydrosilylation catalysts

INVENTOR(S): Hayashi, Tamio; Uozumi, Yasuhiro; Yamazaki, Akiko; Kumobayashi, Hidenori

PATENT ASSIGNEE(S): Takasago International Corp., Japan

SOURCE: Eur. Pat. Appl., 12 pp.

CODEN: EPXXDW

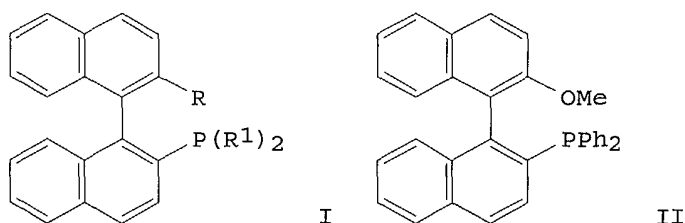
DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 503884	A1	19920916	EP 1992-302010	19920310 <--
EP 503884	B1	19950726		
R: CH, DE, FR, GB, IT, LI, NL				
JP 05017491	A2	19930126	JP 1991-266864	19910919 <--
JP 2733880	B2	19980330		
US 5231202	A	19930727	US 1992-850998	19920312 <--
PRIORITY APPLN. INFO.:			JP 1991-70339	19910312
			JP 1991-266864	19910919
OTHER SOURCE(S):		MARPAT 118:7190		
GI				



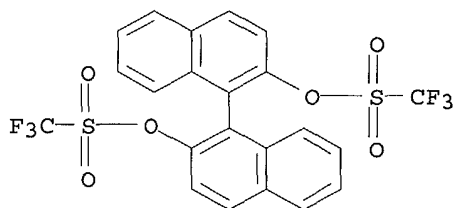
AB Title compds. [I; R = alkyl, OR<sub>2</sub>; R<sub>1</sub> = Ph, pentafluorophenyl; R<sub>2</sub> = H, cycloalkyl, (halo)alkyl, (alkoxy)alkoxy, Ph), were prepd. Thus, (S)-2,2'-binaphthol was stirred with (F<sub>3</sub>CSO<sub>2</sub>)<sub>2</sub> and pyridine in CH<sub>2</sub>Cl<sub>2</sub> overnight to give 92% bis-triflate which was stirred with Ph<sub>2</sub>P(O)H, Pd(OAc)<sub>2</sub>, and 1,4-bis(diphenylphosphino)butane in Me<sub>2</sub>SO at 100.degree. for 12 h to give 96% (S)-(-)-2-trifluoromethanesulfonyl-2'-diphenylphosphinoyl-1,1'-binaphthyl. The latter was hydrolyzed with 3N NaOH in MeOH/dioxane in 81.5% yield and the product was O-methylated with MeI/K<sub>2</sub>CO<sub>3</sub>/acetone (98%) and reduced with Cl<sub>3</sub>SiH/Et<sub>3</sub>N in xylene (79%) to give 19% (S)-II. This was used to enantioselectively hydrosilylate 1-phenyl-1,3-butadiene with Cl<sub>3</sub>SiH.

IT 128544-05-8P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of, as intermediate for enantioselective hydrosilylation catalysts)

RN 128544-05-8 CAPLUS

CN Methanesulfonic acid, trifluoro-, (1S)-[1,1'-binaphthalene]-2,2'-diyl ester (9CI) (CA INDEX NAME)



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COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
74.46	377.17

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
-9.77	-10.42

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STN INTERNATIONAL LOGOFF AT 10:02:23 ON 02 OCT 2003